

## THERMAL ASPERITY COMPENSATION IN PERPENDICULAR RECORDING SYSTEM

### ABSTRACT OF THE DISCLOSURE

A detection circuit and method for detecting data in a read data signal generated by a head of a perpendicular recording system is provided. The detection circuit includes a channel circuit to amplify the read data signal. A transient detector, in response to detecting a transient in the read data signal, generates a transient detect signal. A first path and a second path are coupled to an output of the channel circuit. The first path includes a first data detector that generates a first detected data signal in response to detecting data in the read data signal. The second path includes a series connected combination of a data filter and a second data detector. The filter generates a filtered data signal in which low frequency components of the read data signal are attenuated. The second data detector generates a second detected data signal in response to detecting data in the filtered data signal. A switch is controllable, in response to the transient detect signal, to couple either the first detected data signal or the second detected data signal to a data processor. The second detected data signal is coupled to the data processor when the transient detect signal indicates a transient is detected. The first detected data signal is coupled to the data processor when the transient detect signal does not indicate a transient is detected.